TOSTAT" 99602001

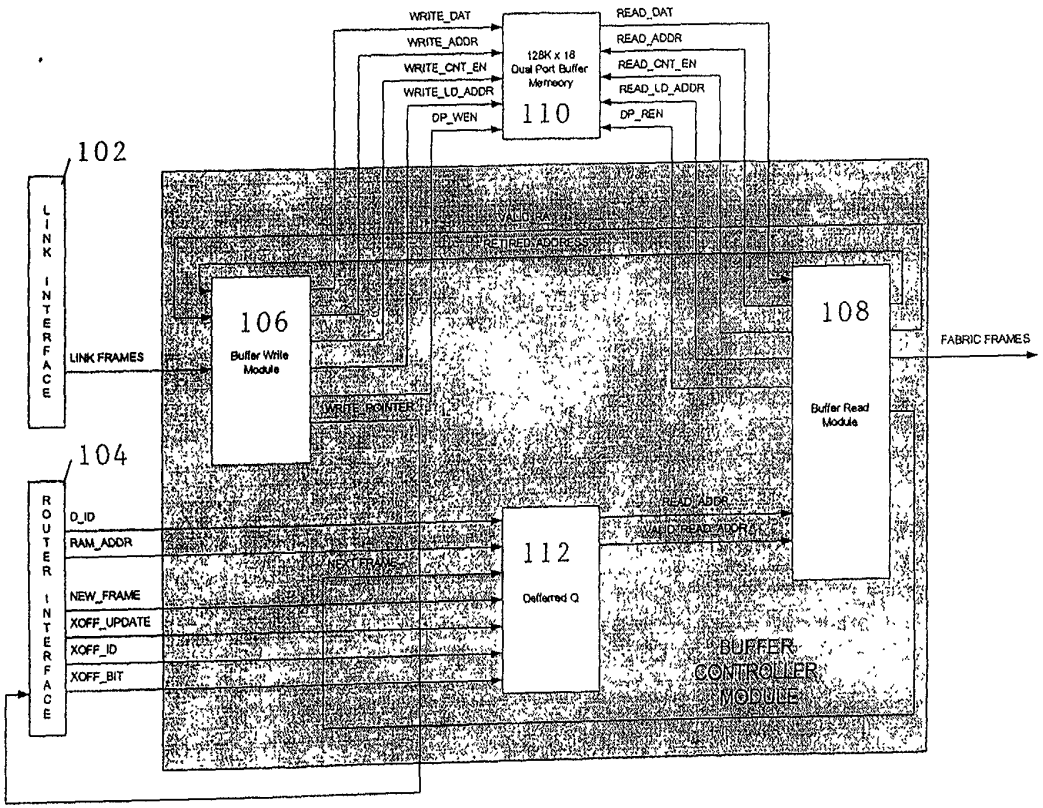

FIG. 1

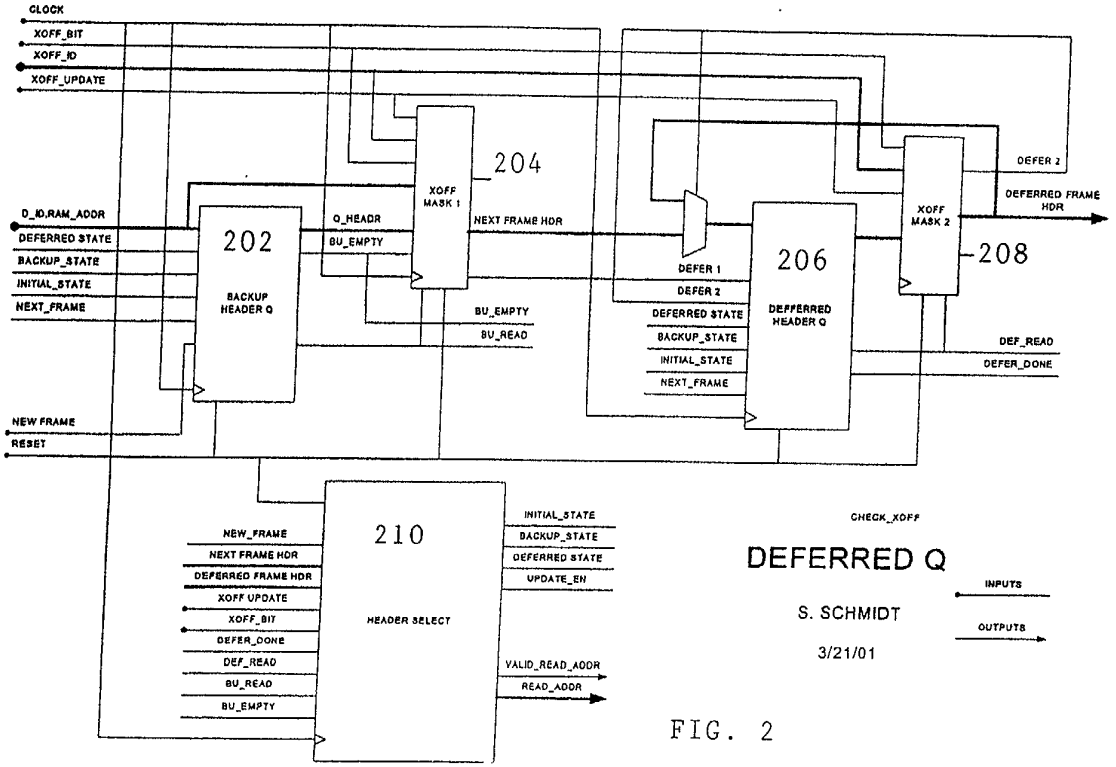
CLOCK
XOFF_BIT
XOFF_ID
XOFF_UPDATE
204
XOFF MASK 1
D_ID,RAM_ADDR
DEFERRED STATE
BACKUP_STATE
INITIAL_STATE
NEXT_FRAME
202
BACKUP HEADER Q
Q_HEADR
BU_EMPTY
NEXT FRAME HDR
BU_EMPTY
BU_READ
DEFER 1
DEFER 2
DEFERRED STATE
BACKUP_STATE
INITIAL_STATE
NEXT_FRAME
206
DEFFERRED HEADER Q
XOFF MASK 2
208
DEFER 2
DEFERRED FRAME HDR
DEF_READ
DEFER_DONE
NEW FRAME
RESET
210
NEW_FRAME
NEXT FRAME HDR
DEFERRED FRAME HDR
XOFF UPDATE
XOFF_BIT
DEFER_DONE
DEF_READ
BU_READ
BU_EMPTY
HEADER SELECT
INITIAL_STATE
BACKUP_STATE
DEFERRED STATE
UPDATE_EN
VALID_READ_ADDR
READ_ADDR
CHECK_XOFF
DEFERRED Q
S. SCHMIDT
3/21/01
INPUTS
OUTPUTS

FIG. 2

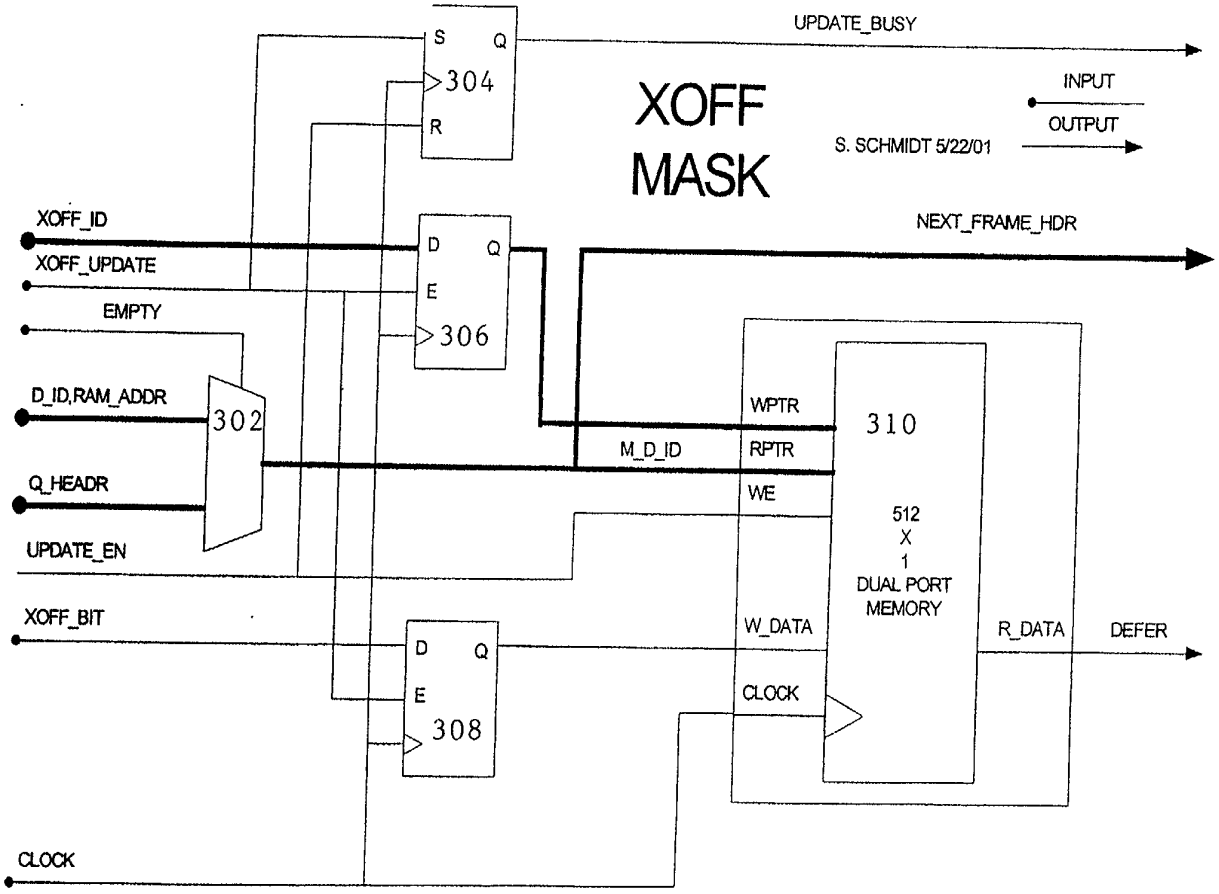
XOFF
MASK
S. SCHMIDT 5/22/01
INPUT
OUTPUT
S
Q
304
R
UPDATE_BUSY
XOFF_ID
XOFF_UPDATE
EMPTY
D_ID,RAM_ADDR
Q_HEADR
UPDATE_EN
XOFF_BIT
CLOCK
D
Q
E
306
302
308
NEXT_FRAME_HDR
M_D_ID
WPTR
RPTR
WE
W_DATA
CLOCK
310
512
X
1
DUAL PORT
MEMORY
R_DATA
DEFER

FIG. 3

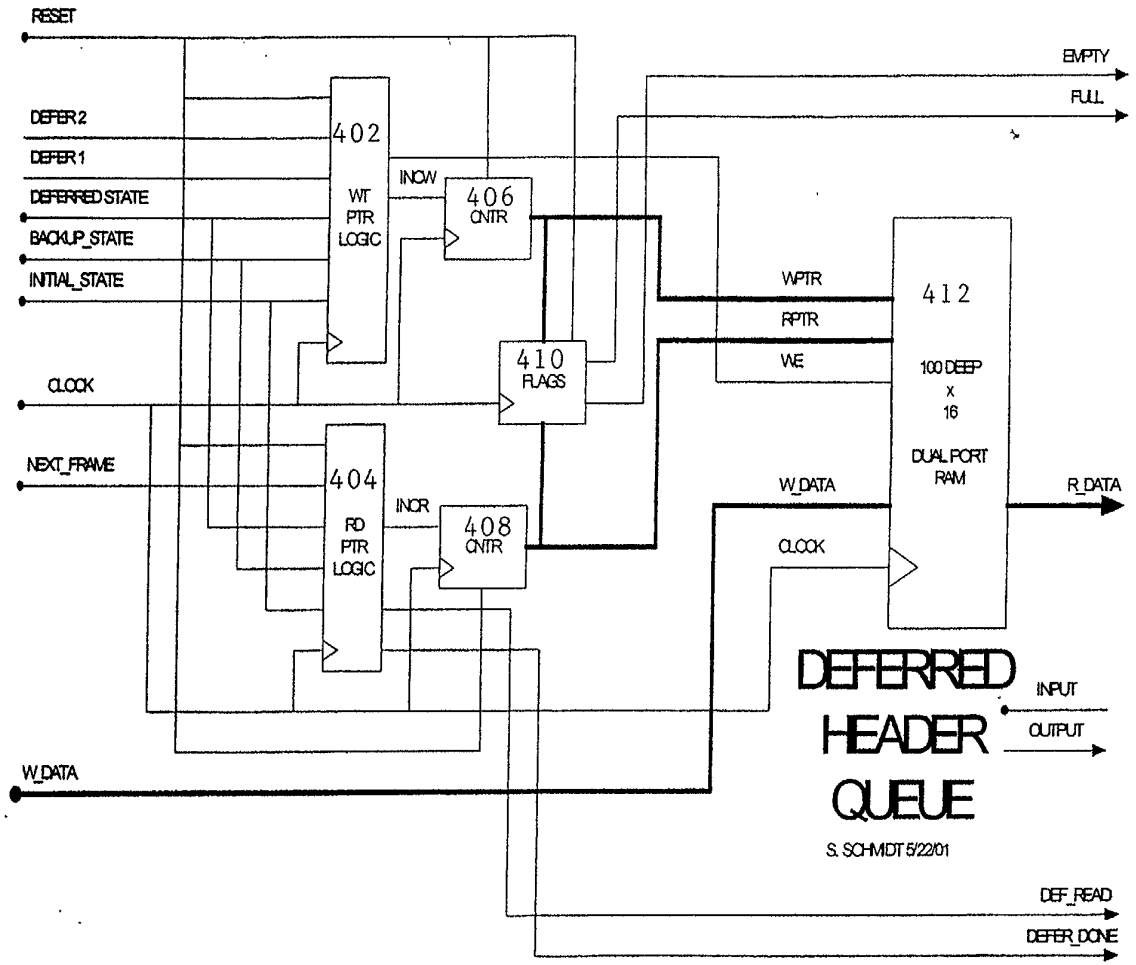
RESET
DEFER 2
DEFER 1
DEFERRED STATE
BACKUP_STATE
INITIAL_STATE
CLOCK
NEXT_FRAME
W_DATA
402
WT PTR LOGIC
INCW
406
CNTR
410
FLAGS
404
RD PTR LOGIC
INCR
408
CNTR
EMPTY
FULL
WPTR
RPTR
WE
412
100 DEEP x 16 DUAL PORT RAM
W_DATA
R_DATA
CLOCK
DEFERRED HEADER QUEUE
S. SCHMIDT 5/22/01
INPUT
OUTPUT
DEF_READ
DEFER_DONE

FIG. 4

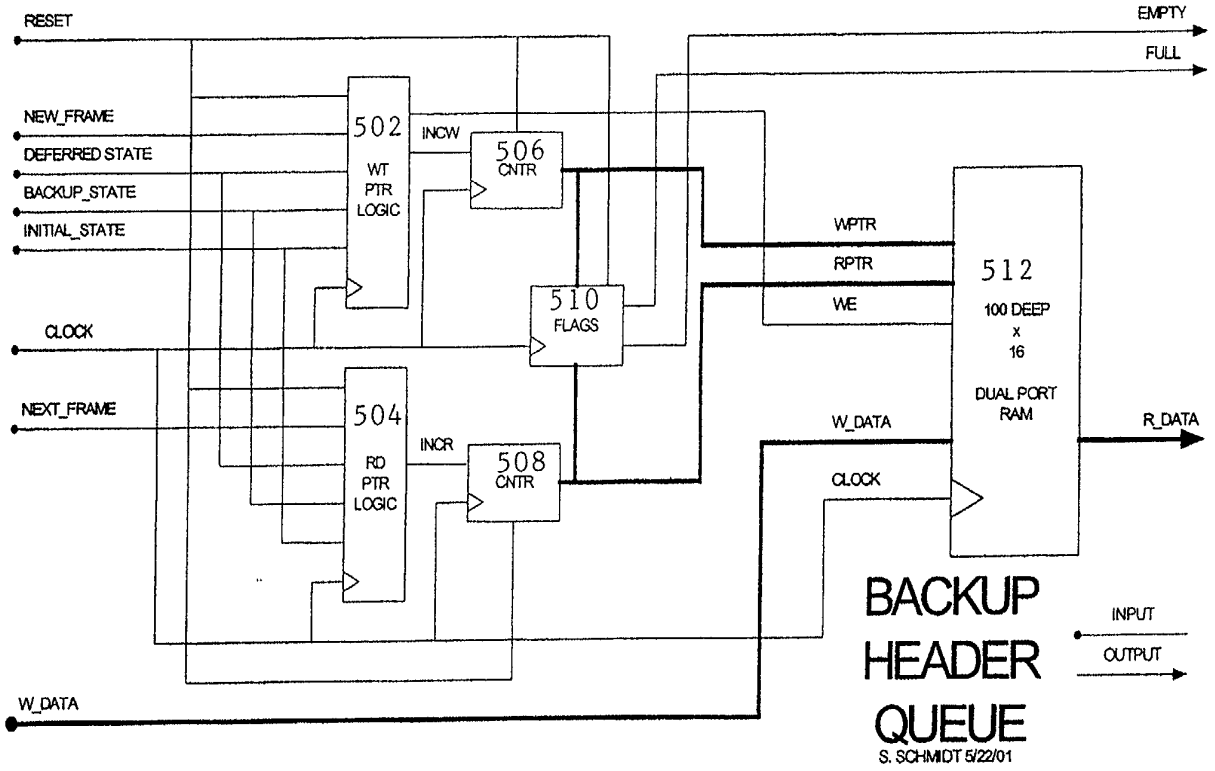
RESET
NEW_FRAME
DEFERRED STATE
BACKUP_STATE
INITIAL_STATE
CLOCK
NEXT_FRAME
W_DATA
502
WT PTR LOGIC
INCW
506
CNTR
510
FLAGS
504
RD PTR LOGIC
INCR
508
CNTR
EMPTY
FULL
WPTR
RPTR
WE
512
100 DEEP x 16 DUAL PORT RAM
W_DATA
CLOCK
R_DATA
BACKUP HEADER QUEUE
S. SCHMIDT 5/22/01
INPUT
OUTPUT

FIG. 5

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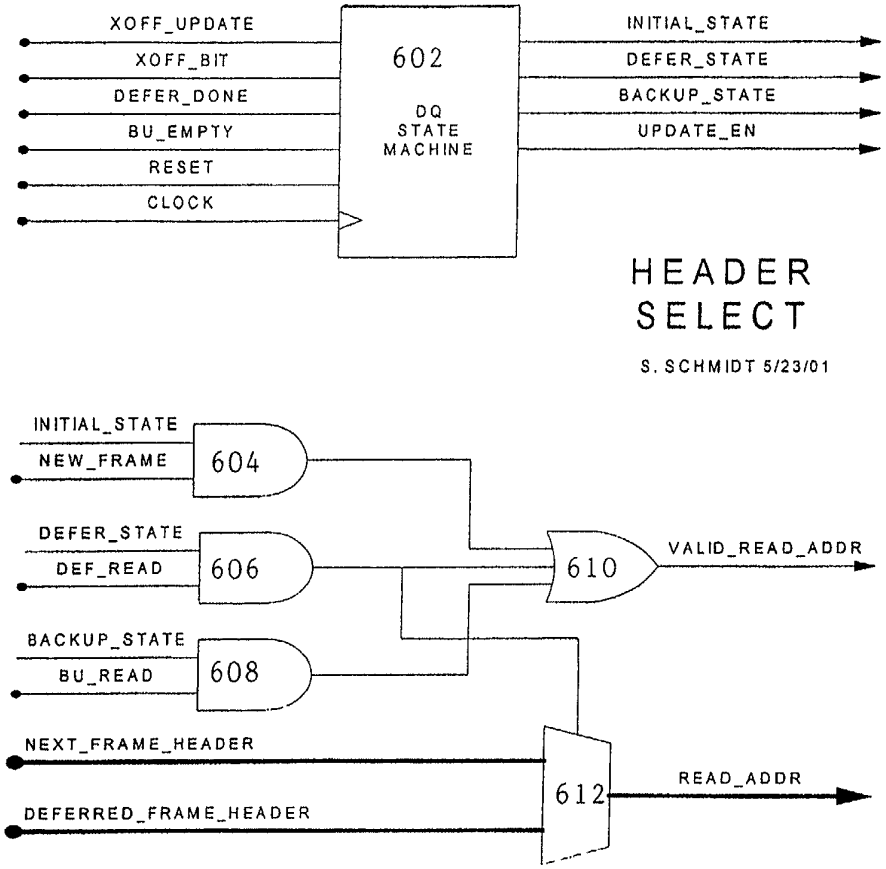

FIG. 6

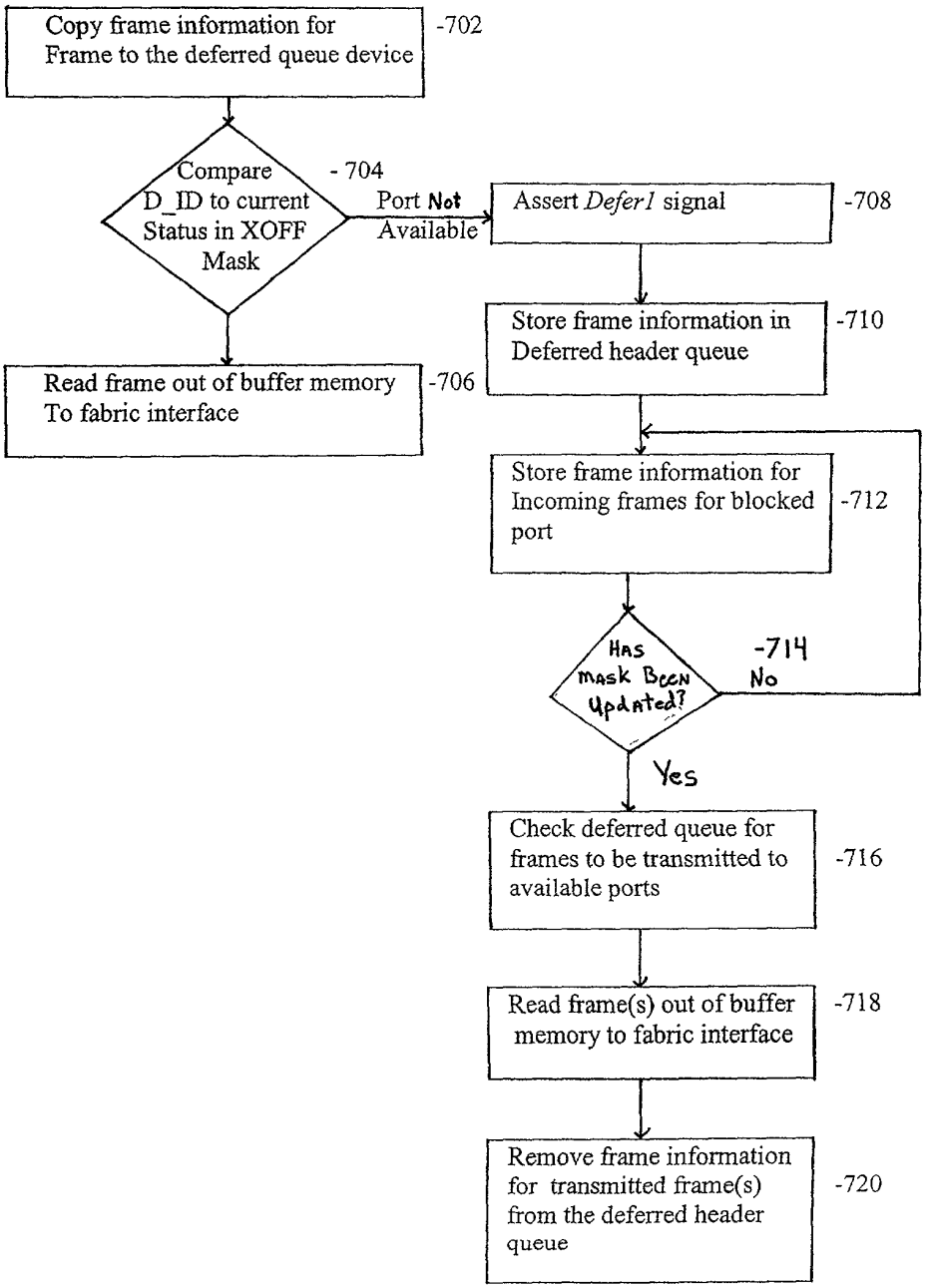
Copy frame information for Frame to the deferred queue device
-702
Compare D_ID to current Status in XOFF Mask
- 704
Port Not Available
Assert Defer1 signal
-708
Store frame information in Deferred header queue
-710
Read frame out of buffer memory To fabric interface
-706
Store frame information for Incoming frames for blocked port
-712
Has mask Been Updated?
-714
No
Yes
Check deferred queue for frames to be transmitted to available ports
-716
Read frame(s) out of buffer memory to fabric interface
-718
Remove frame information for transmitted frame(s) from the deferred header queue
-720

FIG. 7

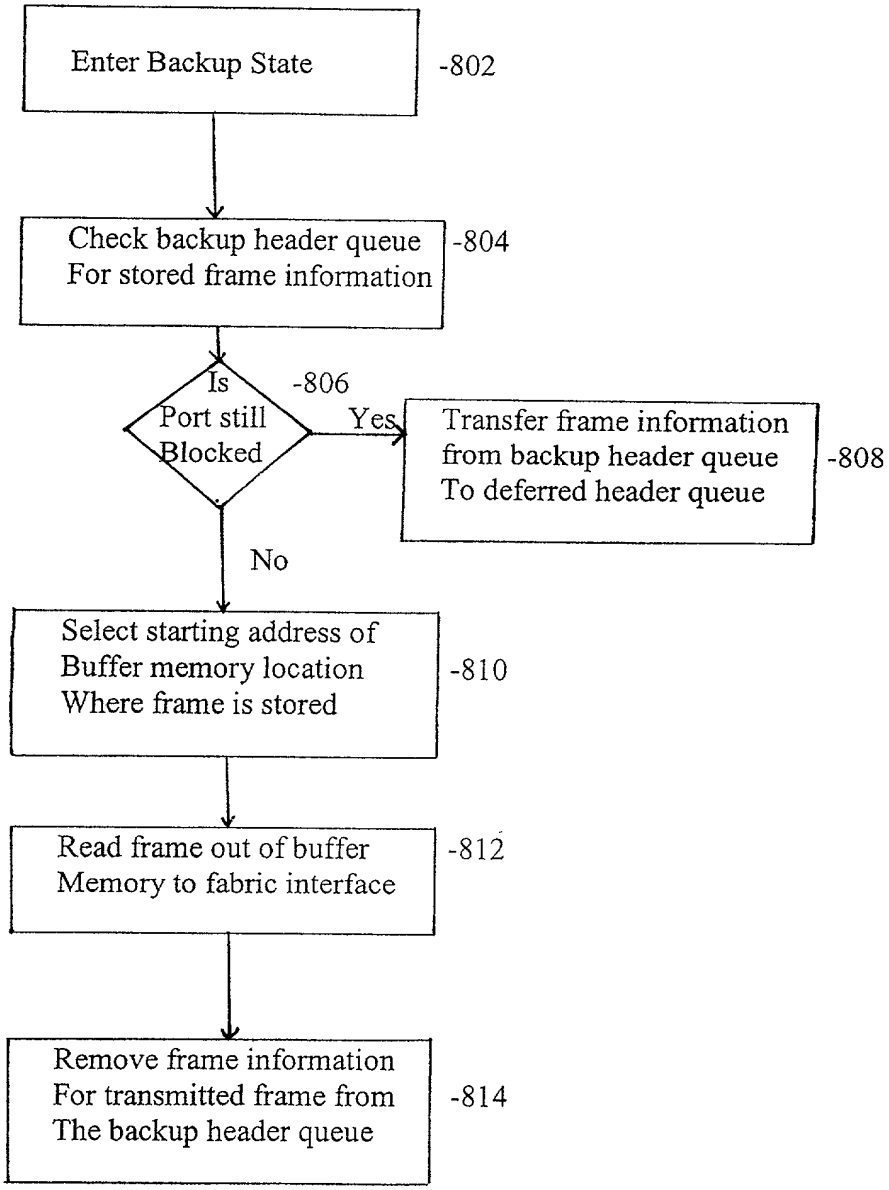
Enter Backup State
-802
Check backup header queue
For stored frame information
-804
Is
Port still
Blocked
-806
Yes
Transfer frame information
from backup header queue
To deferred header queue
-808
No
Select starting address of
Buffer memory location
Where frame is stored
-810
Read frame out of buffer
Memory to fabric interface
-812
Remove frame information
For transmitted frame from
The backup header queue
-814

FIG. 8